Precision TIG® 375

Output: CC, AC, DC

Input: 1 PHASE, 60 Hz, 50 Hz

The Power To Perform!℠

With patented Micro-Start II® Technology, New and Improved AC Auto Balance®, built-in Advanced Control Panel, and Power Factor Correction on board, the Precision TIG® 375 delivers the Power To Perform!℠ A load of new features, simple controls, innovative accessory storage, and attractive and consistent welds support this welder's position as the best in class. Whatever the TIG welding application–fabrication, aerospace, production, motorsports, or vocational education–choose the Precision TIG® 375 for outstanding features and precise arc performance.

Processes
Stick, TIG

Advantage Lincoln

Precision Arc Performance:

- Patented Micro-Start II™ Technology delivers extremely stable low amperage starting, welding and cratering for both AC and DC welding. NEW!
- Selectable welding modes such as high frequency, scratch start, and Touch Start TIG®. NEW!
- High duty cycles–375 amps at 40% duty cycle.
- Widest welding range in its class 2-420 amps for both AC and DC. NEW!
- Advanced Control Panel. TIG pulser allows you to control heat input for any weld.
- Standard power factor correction capacitors lower input currents when welding at higher output.
- Excellent stick welder–even with Fleetweld® 5P (E6010) with new Automatic Hot Start™ and Auto Adaptive Arc Force™ controls.

Simple Controls – Easy to Use:

- Redesigned controls are simple and well-spaced for effortless setting changes. NEW!
- Hidden menu button features 7 programmable parameters without cluttering the control panel. NEW!
- New and Improved AC Auto Balance® has been readjusted to have more penetration and improved bead appearance. NEW!
- Spot On Timer provides adjustable arc for consistent spot welds. NEW!

Professional Features:

- The K2624-1 Ready-Pak® model Precision TIG® 375 (208/230/460/1/60). Under-Cooler Cart Water Cooler, Foot Amptrol®, Gas Regulator/Flowmeter & Hose Kit, PTW-20 Pro-Torch™ TIG Torch (250 amp, 25 ft.), Zippered Torch Cover, Parts Kit, Water Hose (2 included) 15 ft., and 15 ft. 2/0 Work Cable and Clamp. NEW!
- 115 volt auxiliary power receptacles. Great for powering an optional water cooler or power tools.
- Add an optional Under-Cooler Cart for extra storage and water-cooled applications.
- Built-in storage compartment for torch consumables.
- Water-cooled torch connections with no adapters required–side mounted, out of the way, and well protected.
- Neat/organized cable management with integrated torch holster.

Superb Quality:

- Fan-As-Needed™ (F.A.N.) prevents overheating. F.A.N. reduces power consumption noise, motor wear and dust in the machine.
- CSA C/US certified.
- Three-Year Lincoln Warranty on parts and labor. Two-year extended warranty available in the U.S.

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle (104°F, 40°C)	Input Current @ Rated Output	Output Range	Dimensions H x W x D inches (mm)	Net Weight lbs (kg)
Precision TIG® 375	K2622-1	208/230/460/1/60	375A/35V/40%	112/102/51A with PFC	DC: 2-420A AC: 2-420A Max. OCV: 80V	31 x 22 x 26 (787 x 559 x 660)	507 (230)
	K2622-2	230/460/575/1/60	375A/35V/40%	102/51/41A with PFC			
	K2623-1	220-230/380-400/ 415/1/50/60	375A/35V/40%	119/69/63A with PFC			
Precision TIG® 375 Ready-Pak® Package	K2624-1	208/230/460/1/60	375A/35V/40%	112/102/51A with PFC		49.7 x 28 x 41 (1262 x 711 x 1041)	751 (341)

ARC PERFORMANCE

Micro-Start II™ Technology — More than just a starting aid.

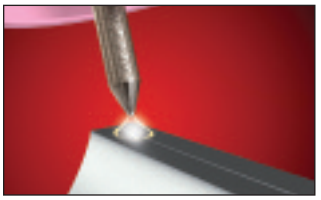
Better control for starting, arc stability and crater fill.

MICRO START™ II TECHNOLOGY

NOW INCLUDES AC for ALUMINUM WELDING

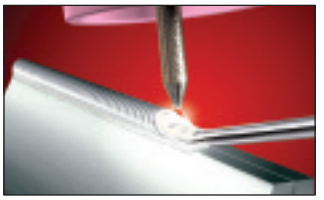
Great Starting

Micro-Start II™ Technology minimizes high frequency and 'hot starts' to deliver soft arc starts without arc wandering for AC and DC welding.



Stable, Focused Arc

Micro-Start II™ Technology aids arc stability THROUGHOUT THE WELD CYCLE – even at the lowest amperage!



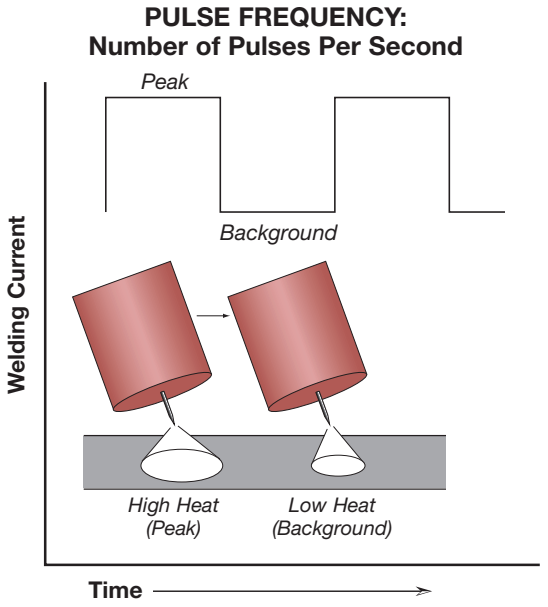
Precise Crater Fill

Micro-Start II™ Technology controlled ramp down helps precisely fill the weld crater for quality results.

"Set It/See It" Pulse Control — Make attractive and consistent welds!

What Is It?

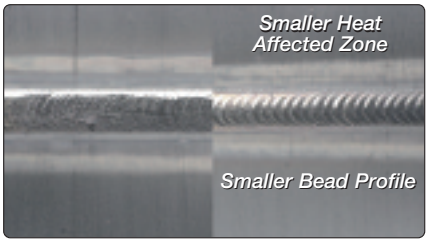
Pulse welding systems vary weld current between peak (high heat) and background current (low heat) levels. Adjusting the pulse frequency controls the level of heat input applied to the weld relative to the weld travel speed.



Results

Better control of heat input in the weld, resulting in:

- Reduced warping and burnthrough on thin materials.
- Smaller heat-affected zone – good for thin material.
- Smaller bead profile without compromising proper penetration.



Standard TIG Weld (at 60 amps) *Pulsed TIG Weld (at 60 amps)*

Great For

- **Thin materials** – Faster pulse settings help to narrow the bead profile and minimize the heat-affected zone and resulting warping or burnthrough.
- **Consistent appearance** – Slower pulse settings aid in timing the application of filler metal to produce the consistent stacked bead appearance associated with high quality TIG welding.
- **Maintaining a steady welding rhythm.**

Easy "Set It/See It" Operation:

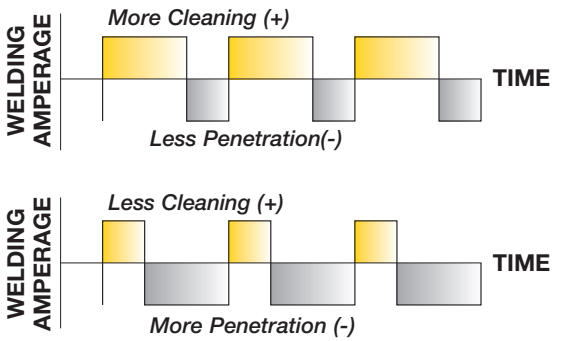
- Flashing indicator light lets you see the pulse rate before you strike an arc.

AC Auto Balance® Controls — Automatically sets the optimal cleaning vs. penetration level for aluminum welding!

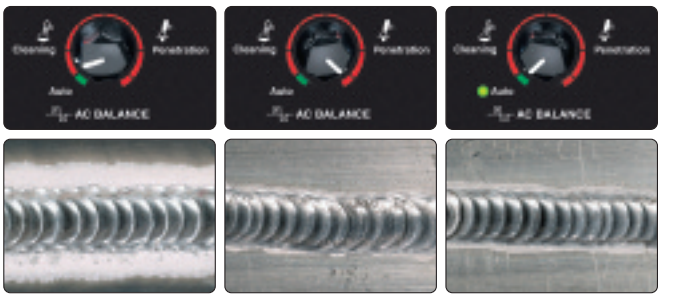
What Is It?
When aluminum welding, the positive (+) portion of the AC welding amperage cleans the oxides from the aluminum surface. The negative (-) portion delivers more heat input, increasing penetration level.

Patented AC Auto Balance® automatically sets the ratio of cleaning action (+) versus penetration (-) based on amperage.

Manual balance control provides the flexibility to customize the arc to your preference.



Easy Operation:
- Set it and forget it or override when you choose to customize the settings.



Maximum Cleaning Setting | *Maximum Penetration Setting* | *Auto Balance Setting*

PERFORMANCE

- Excellent stick welding performance.
  - — Weld steel, stainless and low allow metals with ease.
  - — Weld sheet metal, pipe and heavy plate.
  - — Weld with Lincoln® Blue Max® Stainless, Excalibur® Low Hydrogen and Fleetweld® 5P welding electrodes.
- Wider output range — for maximum flexibility:
  - — 2-420A DC, 2-420 AC.
- More amperage than nearest competitor at 40% duty cycle — 25 amps more!
- Lower input current draw compared to nearest competitor — up to 10% less current with 40% more duty cycle.

AC Auto Balance® is especially useful on critical aluminum applications.

FEATURES

Torch Parts Storage Compartment.

Built-in TIG pulser helps you make great welds.

Easily accessible input voltage reconnect panel.

Shown: K2624-1
Water-Cooled Ready-Pak® With Cart Package

Water-cooled torch connections with no adapters — side mounted to keep out of the way and protected.

Separate output studs for stick and TIG keep both stick electrode holder and TIG torch connected at the same time — eliminates set-up changeover when switching processes.

Neat/organized cable management with integrated torch holster.

Optional Features:

(standard with K2624-1 Water-Cooled Ready-Pak® With Cart Package)

Lockable Undercarriage Storage and Water-Cooler Drawers. Reliable Pro-Con pump.

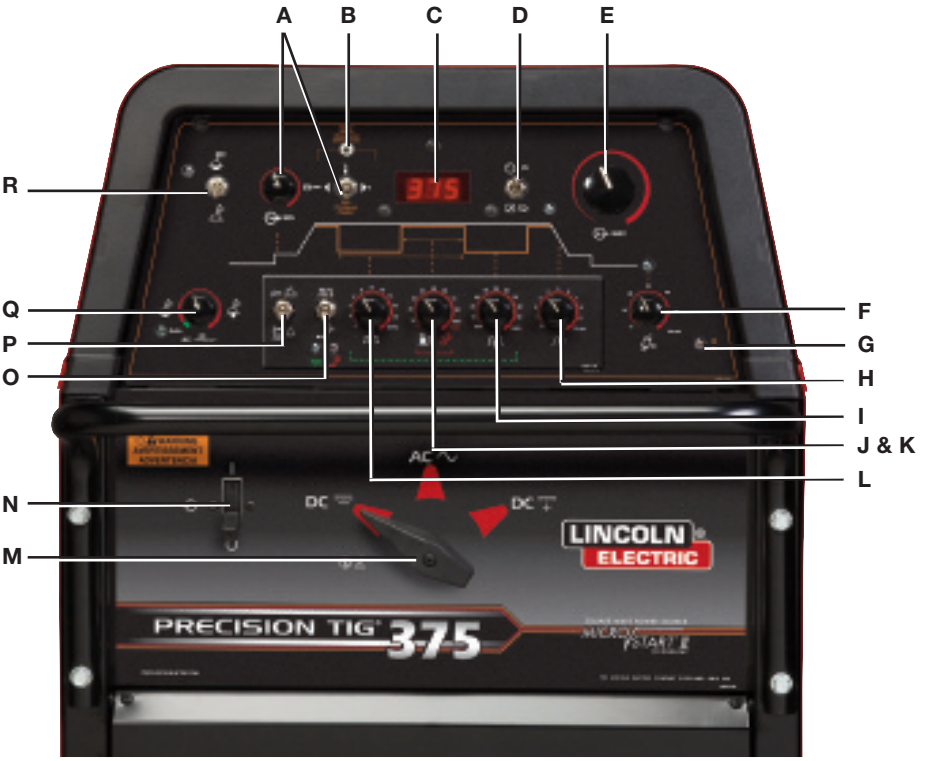
Low-Lift Shielding Gas Bottle Platform.

FEATURES, CON'T.

- Large, well-spaced controls make it easy to view and set up with gloved hands.

Key Controls

A) Minimum Output Preset Control & Display Switch (Also displays output voltage)
B) Set-Up Menu (see below) NEW!!
C) Digital Amperage Meter
D) Local/Remote Current Control Switch
E) Maximum Output Preset Control
F) Post Flow Time
G) Thermal Shutdown Light
H) Downslope Time
I) Pulse Background Current Control
J) Pulse % On Time Control
K) Spot Time NEW!!
L) Pulse Frequency Control
M) Polarity Switch
N) Power Switch
O) Pulse/Spot Time Mode Switch
P) Trigger Switch
Q) AC Balance Control
R) Mode Switch
S) Remote Receptacle (not shown)



SET-UP MENU NEW!!

Press and hold the menu button to display up to seven programmable parameters. The setting of the desired level is displayed, and increasing or decreasing the level setting is easy.

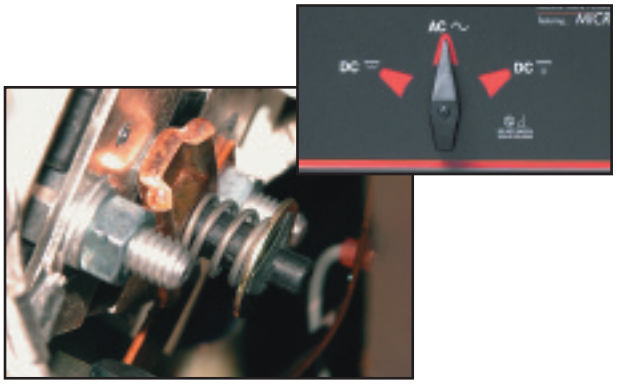
The Set-Up Menu includes:

- DC TIG Start Modes: High Frequency, Scratch Start, and Touch Start TIG™.
- Adjustable Preflow Time.
- Adjustable Start Pulse for Soft or Forceful Starts.
- Adjustable TIG Hot Start.
- Adjustable Upslope Time.
- Adjustable Stick Hot Start.
- Adjustable Stick Arc Force.

QUALITY AND RELIABILITY

- Fan-As-Needed™ (F.A.N.) minimizes repeated heating and cooling of internal components, keeps dust and dirt build-up to a minimum and saves on electricity costs.
- Engineered cooling air routing brings clean air in from the top and exhausts at the bottom to draw and collect less dirt in the machine *(see photo at right)*, unlike competitive systems with a vacuum cleaner-like floor intake.
- Compare these reliability enhancing design features:
  - — Crimped and soldered power connections.
  - — Wound and varnished electrical coils do not require coil spacers to remain secure. Competitive models use wooden coil spacers that can loosen over time.
  - — Locking tabs on PC board connectors eliminates loose connections.
- Tough testing cycles ensure long service — dropping, jerking, rolling, shipping, vibration, resistance to real world extreme conditions, and extended in-service life testing.
- Line Voltage Compensation holds output setting constant to maintain weld quality even when the input voltage fluctuates ±10%.
- CSA C/US certified.
- Lincoln three-year warranty on parts and labor. Two-year extended warranty available in the U.S.

Clean, cool air route shown.



Snap-action durable switches make positive mechanical contact to reduce chances of intermittent contact failure.

SYSTEM SELECTION

Ready-Pak® Package
Take the hassle out of ordering. Order a Ready-Pak® pre-assembled welding package.

Precision TIG® 375 Water-Cooled Ready-Pak® Package
One product number (K2624-1) gets you all this:
- Precision TIG® 375 (208/230/460/1/60) **– K2622-1**
- Under-Cooler Cart Water Cooler **– K1828-1**
- Foot Amptrol® **– K870**
- Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit **– 3100211**
- PTW-20 Pro-Torch™ TIG Torch (250 amp, 25 ft.) **– K1784-4**
- Zippered Torch Cover **– K918-2**
- Parts Kit **– KP510**
- Water Hose (2 included) **– S19558-4**
- 15 ft. (4.5m), 2/0 Work Cable and Clamp **– K2150-1**
- Adapter for optional PTA-9 or 17 Torch (3/8") **– S20403-4**

Order K2624-1

Shown: K2624-1
Water-Cooled Ready-Pak® Package

RECOMMENDED OPTIONS

GENERAL OPTIONS

Under-Cooler Cart Water Cooler
Includes "cooler-in-a-drawer" with hoses and a lockable storage drawer on a dual bottle undercarriage. Two gallon (7.5 ltrs.) capacity.
Order K1828-1

Undercarriage
Includes a dual bottle rack with chain and front casters, rear wheels and a handle.
Order K1869-1

Harris® Argon Flowmeter Regulator
Deluxe flowmeter/regulator. Includes 10 ft. (3.0 m) hose.
Order 3100211

Work Clamp & Cable Assembly
15 ft. 2/0 cable with 1/2" stud lug and work clamp.
Order K2150-1

STICK OPTIONS

Accessory Kit
For stick welding. Includes 35 ft. (10.7 m) 2/0 electrode cable with lug, 30 ft. (9.1 m) 2/0 work cable with lugs, headshield, filter plate, work clamp and electrode holder. 400 amp capacity.
Order K704

Accessory Kit
For stick welding. Includes 20 ft. (6.1 m) #6 electrode cable with lug, 15 ft. (4.6 m) #6 work cable with lugs, headshield, filter plate, work clamp, electrode holder and sample pack of mild steel electrode. 150 amp capacity.
Order K875

Remote Output Control
Consists of a control box with choice of two cable lengths. Permits remote adjustment of output. 6 pin connection.
Order K857 for 25 ft. (7.6 m)
Order K857-1 for 100 ft. (30.5 m)

TIG OPTIONS

Magnum® Pro-Torch™ TIG Torches
A full line of air-cooled and water-cooled torches available.
Request publication E12.150

PTA-26 One-Cable Adapter
Adapts the 7/8" PTA-26 fitting to the 5/8" gas and power connection on machine.
Order K2166-1

PTA-9, -17 One-Cable Adapter
Adapts the 3/8" PTA-9 or -17 fitting to the 5/8" gas and power connection on machine.
Order K2166-3

PTA-9, PTA-17, PTA-26 Two-Cable Adapter
Converts the 7/8" water and power connection on the machine to a 1/2" output stud for use with a two-cable air-cooled TIG torch.
Order K2166-2

Foot Amptrol®
Varies current for making critical TIG welds. Depress pedal to increase current. Depressing pedal fully achieves maximum set current. Fully raising the pedal finishes the weld and starts the afterflow cycle. Includes 25 ft. (7.6 m) control cable. 6-pin plug connection.
Order K870

Hand Amptrol®
Provides 25 ft. (7.6m) of remote current control for TIG welding (6 pin plug connection). Velcro straps secure torch.
Order K963-3 (One size fits all Pro-Torch TIG Torches.)

Arc Start Switch
Needed if an Amptrol is not used when TIG welding. Comes with a 25 ft. (7.6 m) cable. Attaches to the TIG torch for convenient finger control. 6-pin plug connection.
Order K814

RECOMMENDED OPTIONS

PRECISION TIG® 375 ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
Precision TIG® 375 (208/230/460/1/60)	**K2622-1**		
Precision TIG® 375 (230/460/575/1/60)	**K2622-2**		
Precision TIG® 375 (220-230/380-400/415/1/50/60)	**K2623-1**		
Ready-Pak® Package			
Precision TIG® 375 (208/230/460/1/60)	K2624-1		
Recommended General Options			
Under-Cooler Cart Water Cooler	K1828-1		
Undercarriage	K1869-1		
Work Clamp and Cable Assembly	K2150-1		
Recommended Stick Options			
Stick Accessory Kit, 400 amps	K704		
150 amps	K875		
Remote Output Control, 25 ft. (7.6 m)	K857		
100 ft. (30.5 m)	K857-1		
Recommended TIG Options			
Pro-Torch™ Water-Cooled TIG Torches (No adapter required.)	See publication E12.150		
Pro-Torch™ Air-Cooled TIG Torches (Specific adapter required.)	See publication E12.150		
PTA-26 One-Cable Adapter	K2166-1		
PTA-9, -17 One-Cable Adapter (Included with machine.)	K2166-3		
PTA-9, -17, -26 Two-Cable Adapter	K2166-2		
Water Solenoid Kit	K1830-1		
Harris® Argon Flowmeter Regulator	3100211		
Foot Amptrol®	K870		
Hand Amptrol®	K963-3		
Arc Start Switch	K814		
Cut Length Consumables	See publication C9.10		
	TOTAL:		

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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LINCOLN ELECTRIC
THE WELDING EXPERTS®

THE LINCOLN ELECTRIC COMPANY
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